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| 09/013,490                 | 01/26/1998    | ALEXANDER S. TUZHILIN | 2011/13                      | 3399             |  |
| 75                         | 90 04/24/2002 |                       |                              |                  |  |
| BAKER BOTTS L.L.P.         |               |                       | EXAMINER                     |                  |  |
| 30 ROCKEFEL<br>NEW YORK, N |               |                       | WINDER, PATRICE L            |                  |  |
|                            |               |                       | ART UNIT                     | PAPER NUMBER     |  |
|                            |               |                       | 2155 DATE MAILED: 04/24/2002 | 24               |  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Application No.     |                                                      | Applicant(s)    |        |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------|-----------------|--------|--|--|--|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 09/013,490          |                                                      | TUZHILIN ET AL. |        |  |  |  |
| Office Action Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Examiner            |                                                      | And Unit        |        |  |  |  |
| ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Patrice L Winder    |                                                      | 2155            | (V)    |  |  |  |
| The MAILING DATE of this communication app                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     | sheet with the co                                    |                 | ddress |  |  |  |
| Period for Reply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     |                                                      |                 |        |  |  |  |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).  - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).  Status |                     |                                                      |                 |        |  |  |  |
| 1)⊠ Responsive to communication(s) filed on <u>13 F</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ebruary 2002 .      |                                                      |                 |        |  |  |  |
| <u></u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | s action is non-fir | nal.                                                 |                 |        |  |  |  |
| 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |                                                      |                 |        |  |  |  |
| closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. <b>Disposition of Claims</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                                      |                 |        |  |  |  |
| 4)⊠ Claim(s) <u>38,39,41-59 and 61-86</u> is/are pending in the application.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                     |                                                      |                 |        |  |  |  |
| 4a) Of the above claim(s) is/are withdrawn from consideration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                                      |                 |        |  |  |  |
| 5) Claim(s) is/are allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |                                                      |                 |        |  |  |  |
| 6)⊠ Claim(s) <u>38-39, 41-59, 61-86</u> is/are rejected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     | •                                                    |                 |        |  |  |  |
| 7) Claim(s) is/are objected to.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     |                                                      |                 |        |  |  |  |
| 8) Claim(s) are subject to restriction and/or                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | election requirer   | nent.                                                |                 |        |  |  |  |
| Application Papers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |                                                      |                 |        |  |  |  |
| 9) The specification is objected to by the Examiner  10) The drawing(s) filed on is/are: a) accept                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     | d to by the Even                                     | ninor           |        |  |  |  |
| , , , , , , , , , , , , , , , , , , , ,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     | -                                                    |                 |        |  |  |  |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  11) The proposed drawing correction filed on is: a) approved b) disapproved by the Examiner.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     |                                                      |                 |        |  |  |  |
| If approved, corrected drawings are required in reply to this Office action.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                     |                                                      |                 |        |  |  |  |
| 12) The oath or declaration is objected to by the Examiner.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |                                                      |                 |        |  |  |  |
| Priority under 35 U.S.C. §§ 119 and 120                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                                                      |                 |        |  |  |  |
| 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     |                                                      |                 |        |  |  |  |
| a) ☐ All b) ☐ Some * c) ☐ None of:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |                                                      |                 |        |  |  |  |
| 1. Certified copies of the priority documents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | have been recei     | ved.                                                 |                 |        |  |  |  |
| 2. Certified copies of the priority documents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | have been recei     | ved in Applicatio                                    | n No            |        |  |  |  |
| <ul> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |                                                      |                 |        |  |  |  |
| 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                                      |                 |        |  |  |  |
| a) ☐ The translation of the foreign language provisional application has been received. 15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |                                                      |                 |        |  |  |  |
| Attachment(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -                   | - <del>-</del>                                       |                 |        |  |  |  |
| 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5) 🔲                | Interview Summary<br>Notice of Informal Po<br>Other: |                 |        |  |  |  |

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#### **DETAILED ACTION**

## Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 38-39, 41-43, 50-59, 61-63, 70-86 are rejected under 35 U.S.C. 102(e) as being anticipated by Greenblatt et al., U.S. Patent No. 5,809,238 (hereafter referred to as Greenblatt).

Regarding claim 38, Greenblatt taught an apparatus for monitoring information on a network (col. 4, lines 8-11), comprising:

a storage device storing a predefined criterion (rule table 34), and having a monitoring module thereon (rule processor 37); and

a processing device executing the monitoring module to transmit at least one instruction to the network (probes 16, 18), the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the

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information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operations (col. 6, lines 8-18)

wherein the information includes at least one event which is used for detecting a change on the network (col. 10, lines 36-44).

Regarding dependent claim 39, Greenblatt taught the processing device provides the at least one result to at least one user (col. 6, lines 8-18).

Regarding dependent claim 41, Greenblatt taught the predefined criteria includes at least one condition (Figure 6).

Regarding claim 42, Greenblatt taught an apparatus for monitoring information on a network (col. 4, lines 8-11), comprising:

a storage device storing a predefined criterion (rule table 34), and having a monitoring module thereon (rule processor 37); and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operation (col. 6, lines 8-18),

wherein the information includes at least one event and at least one condition, and wherein the predefined criterion is a rule-based criterion which enables the monitoring operation to monitor for the at least one event on the network and to check if

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a certain condition of the at least one condition is satisfied (Figure 6 and col. 13, line 48-col. 15, lines 61).

Regarding dependent claim 43, Greenblatt taught the rule-based criterion includes:

at least one of a WHEN portion and an IF portion, and a THEN portion (rule table of Figure 6), and

wherein the THEN portion includes a probing action which has at least one probing operator (col. 15, lines 5-27).

Regarding dependent claim 50, Greenblatt taught the monitoring operation is performed on a client station (col. 11, lines 43-53).

Regarding dependent claim 51, Greenblatt taught the processing device performs the monitoring operation (col. 12, lines 57-62, col. 13, lines 10-19).

Regarding claim 52, Greenblatt taught an apparatus for monitoring information on a network (col. 4, lines 8-11), comprising:

a storage device storing a predefined criterion (rule table 34), and having a monitoring module thereon (rule processor 37); and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operations (col. 6, lines 8-18)

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wherein the at least one result includes a copy of at least one monitored predicate (col. 10, lines 36-44).

Regarding claim 53, Greenblatt taught an apparatus for monitoring information on a network (col. 4, lines 8-11), comprising:

a storage device storing a predefined criterion (rule table 34), and having a monitoring module thereon (rule processor 37); and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being executed on the network and requesting a performance of a monitoring operation to monitor the information on the network as a function of the predetermined criterion, the processing device is adapted to receive data from the network based on at least one result of the monitoring operations (col. 6, lines 8-18)

wherein the at least one result includes a copy of a portion of at least one monitored predicate (col. 10, lines 36-44).

Regarding dependent claim 54, Greenblatt taught the monitoring operation is performed by exploring particular data on client sites which are connected to the network (col. 5, lines 26-31).

Regarding dependent claim 55, Greenblatt taught an atomic condition, and a combination of atomic conditions (rule table of Figure 6).

Regarding dependent claim 56, Greenblatt taught the at least one event is one of an instantaneous event and an event which extends over a period of time (col. 3, lines 45-50).

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Regarding dependent claim 57, Greenblatt taught the WHEN portion is used to monitor for an occurrence of at least one event (col. 7, line 31-40).

2. The language of claims 58-59, 61-63, 70-77 is substantially the same as previously rejected claims 38-39, 41-43, 50-57. Therefore, claims 58-59, 61-63, 70-77 are rejected on the same rationale as previously rejected claims 38-39, 41-43, 50-57.

Regarding claim 78, Greenblatt taught an apparatus for monitoring information on a network (col. 4, lines 8-11), comprising:

a storage device storing a predefined criterion (rule table 34), and having a monitoring module thereon (rule processor 37); and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being performed on the network and requesting a performance of a particular operation to continuously monitor the information on the network as a function of the predetermined criterion (col. 6, lines 8-18), the processing device is adapted to receive data from the network based on at least one result of the particular operation (col. 10, lines 36-44).

Regarding dependent claim 79, Greenblatt taught the at least one result is obtained when at least one condition is satisfied (col. 15, lines 15-27).

Regarding claim 80, Greenblatt taught a method for monitoring information on a network (col. 4, lines 8-11), comprising:

receiving a predefined criterion (col. 13, lines 48-62);

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continuously monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at least one instruction on the network (col. 15, lines 5-27); and

receiving data from the network based on at least one result of the monitoring step (col. 15, lines 42-52).

Regarding dependent claim 81, Greenblatt taught further comprising the step of: obtaining the at least one result when at least one condition is satisfied (col. 15, lines 15-27).

Regarding claim 82, Greenblatt taught an apparatus for monitoring information on a network (col. 4, lines 8-11), comprising:

a storage device storing a predefined criterion (rule table 34), and having a monitoring module thereon (rule processor 37); and

a processing device executing the monitoring module to transmit at least one instruction to the network, the at least one instruction being performed on the network and requesting a performance of a particular operation to regularly monitor the information on the network as a function of the predetermined criterion (col. 6, lines 8-18), the processing device is adapted to receive data from the network based on at least one result of the particular operation (col. 10, lines 36-44).

Regarding claim 83, Greenblatt taught a method for monitoring information on a network (col. 4, lines 8-11), comprising:

receiving a predefined criterion (col. 13, lines 48-62);

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regularly monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing at one instruction on the network (col. 15, lines 5-27); and

receiving data from the network based on at least one result of the monitoring step (col. 15, lines 42-52).

Regarding dependent claims 84 and 85, Greenblatt taught the at least one event is detected on the network (col. 7, lines 31-40).

Regarding claim 86, a software arrangement for monitoring information on a network which is capable of being executed by a processor, comprising:

a program which, when executed by the processor, is capable of performing the following steps:

- a) receiving a predefined criterion (col. 14, lines 28-36),
- b) transmitting at least one instruction to the network (launching data probe, col.14. lines 49-55).
- c) monitoring the information on the network as a function of the predefined criterion, wherein the monitoring step being performed by executing the at least one instruction on the network (col. 15, lines 1-20), and
- d) receiving data from the network based on at least one result of the monitoring step (col. 15, lines 42-48).

# Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code 103 not included in this action

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can be found in a prior Office action.

4. Claims 44 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenblatt in view of Chadha et al., U.S. Patent No. 6,134,555 (hereafter referred to as Chadha).

Regarding dependent claims 44 and 64, Greenblatt taught a probing operator (). However, Greenblatt does not specifically teach the probing operator includes a data mining query. Chadha taught a data mining query (col. 4, lines 4-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made that incorporating Chadha's data mining query in Greenblatt's probing operator would have improved system effectiveness. The motivation would have been glean more interesting information from the data collected in Greenblatt's data monitoring system.

Claims 45-47 and 65-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenblatt in view of Hunt et al., U.S. Patent No. 5,893,091 (hereafter referred to as Hunt).

Regarding dependent claim 45, Greenblatt does not specifically teach the an IF portion. However, Hunt taught an IF portion includes the at least one condition is complex (col. 10, lines 34-39).

Regarding dependent claim 46, Hunt taught the at least one complex condition includes at least one of:

an atomic condition (single keyword), and a combination of atomic conditions (combination of keywords, col. 10, lines 43-48).

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Regarding dependent claim 47, Hunt taught the atomic condition includes at least one literal portion (defined with Boolean operators, col. 13, lines 25-30).

As to claims 45-47, it would have been obvious to one of ordinary skill in the art at the time the invention was made that incorporating Hunt Boolean conditions in Greenblatt's monitoring system would have improved system effectiveness. The motivation would have been to enable monitoring for more complex and interdependent events.

5. The language of claims 65-67 is substantially the same as previously rejected claims 45-47. Therefore, claims 65-67 are rejected on the same rationale as previously rejected claims 45-47.

Claims 48-49 and 68-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenblatt and Hunt in view of A. Prasad Sistla et al., Temporal Conditions and Integrity Constraints in Active Database Systems (hereafter referred to as Sistla).

Regarding dependent claim 48, Greenblatt-Hunt does not specifically teach the atomic condition includes at least one binary past temporal operator. However, Sistla taught an atomic condition includes at least one binary past temporal operator (page 4, Section 4.1, paragraph 1).

Regarding dependent claim 49, Greenblatt-Hunt does not specifically teach the atomic condition includes at least one unary past temporal operator. However, Sistla taught atomic condition includes at least one unary past temporal operator (page 4.

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Section 4.1, paragraph 1).

As to claims 48-49, it would have been obvious to one of ordinary skill in the art at the time the invention was made that incorporating Sistla's Past Temporal Logic in Greenblatt's monitoring system would have improved the monitoring system's effectiveness by incorporating more flexible monitoring criterion. The motivation would have been because Past Temporal Logic can be combined with any query language and proves improved condition-action statements used in active monitoring.

The language of claims 68-69 is substantially the same as previously rejected claims 48-49. Therefore, claims 68-69 are rejected on the same rationale as previously rejected claims 48-49.

## Response to Arguments

6. Applicant's arguments with respect to claims 38-39, 41-59, 61-86 have been considered but are most in view of the new ground(s) of rejection.

#### Conclusion

- 7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
  - a. Yung, U.S. Patent No. 5,615,359: taught a data server with data probes employing predicate tests in rule statements;
  - b. Christianson et al., U.S. Patent No. 6,085,186: taught method and system using information written in a wrapper description language to execute query on a network; and

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c. Marques, U.S. Patent No. 6,182,066 B1: taught category processing of query topics and electronic document content topics.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrice Winder whose telephone number is (703) 305-3938. The examiner can normally be reached on Monday-Friday from 10:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh, can be reached on (703) 305-9648. The fax phone number(s) for this Group are after final (703) 746-7238; official (703) 746-7239 and non-official/draft (703) 746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

PATRICE WINDER
PRIMARY EXAMINER